



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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CALIBRATION

Valid To: April 30, 2021

Certificate Number: 2551.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations^{1, 7}:

I. Chemical

Parameter/Equipment	Range	CMC ² (±)	Comments
pH Meter, Fixed Points ³	4.000 pH 7.000 pH 10.000 pH	0.01 pH 0.02 pH 0.04 pH	pH buffer standards
Conductivity Meter ³	(0 to 10) µS (>10 to 100) µS (>10 to 1413) µS (>1413 to 10 000) µS	0.68 µS 0.57 µS 6.0 µS 54 µS	Conductivity standards

II. Dimensional

Parameter/Equipment	Range	CMC ^{2, 4} (±)	Comments
Micrometers ³	Up to 4 in (4 to 24) in	(31 + 6L) µin (61 + 9L) µin	Gage blocks

Parameter/Equipment	Range	CMC ^{2,4} (±)	Comments
Calipers ³	Up to 4 in (4 to 24) in	(290 + 6L) μin (300 + 9L) μin	Gage blocks
Gage Blocks	Up to 0.05 in (0.05 to 0.10) in (0.10 to 0.20) in (0.20 to 0.50) in (0.5 to 1.00) in (1.00 to 2.00) in (2.00 to 4.00) in	4.0 μin 4.1 μin 3.7 μin 6.7 μin 7.8 μin 13 μin 24 μin	Pratt & Whitney Labmaster™
Rulers	Up to 12 in	530 μin	Glass scale
Dial Indicators	Up to 1 in	(31 + 9L) μin	Gage blocks

III. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC ^{2,6} (±)	Comments
DC Voltage – Generate	(0 to 330) mV (0 to 3.3) V (0 to 33) V (0 to 330) V (100 to 1000) V	18 μV/V + 0.1 μV 14 μV/V + 2.0 μV 15 μV/V + 20 μV 21 μV/V + 150 μV 15 μV/V + 1.5 mV	Fluke 5520A
DC Voltage – Measure	(0 to 200) mV (0.2 to 2) V (2 to 20) V (20 to 200) V (200 to 1000) V	4.4 μV/V + 0.1 μV 4.1 μV/V + 0.4 μV 5.0 μV/V + 4 μV 6.4 μV/V + 40 μV 4.6 μV/V + 500 μV	Fluke 8508A
DC High Voltage – Measure	(0 to 20) kV (20 to 40) kV	12 % 12 %	Fluke 80K-40 with Fluke 8508A
DC Clamp-On – Generate	(20 to 150) A (150 to 100) A	0.60 % + 0.14 A 0.40 % + 0.5 A	Fluke 5520A/Fluke 50A coil

Parameter/Equipment	Range	CMC ^{2,6} (±)	Comments
DC Current – Generate	(0 to 330) μ A (0.33 to 3.3) mA (3.3 to 33) mA (33 to 330) mA (0.33 to 3) A (3 to 11) A (11 to 20.5) A	0.012 % + 0.02 μ A 0.35 % + 0.05 μ A 0.35 % + 0.25 μ A 0.35 % + 2.5 μ A 0.39 % + 40 μ A 1.1 % + 500 μ A 0.30 % + 750 μ A	Fluke 5520A
DC Current – Measure	(0 to 200) μ A (0.2 to 2) mA (2 to 20) mA (20 to 200) mA (0.2 to 2) A (2 to 20) A	0.0011 % + 0.0004 μ A 0.004 % + 0.004 μ A 0.0012 % + 0.04 μ A 0.004 % + 0.8 μ A 0.014 % + 16 μ A 0.031 % + 400 μ A	Fluke 8508A
Resistance – Generate	(0 to 11) Ω (11 to 33) Ω (33 to 110) Ω (110 to 330) Ω 330 Ω to 1.1 k Ω (1.1 to 3.3) k Ω (3.3 to 11) k Ω (11 to 33) k Ω (33 to 110) k Ω (110 to 330) k Ω 330 k Ω to 1.1 M Ω (1.1 to 3.3) M Ω (3.3 to 11) M Ω (11 to 33) M Ω (33 to 110) M Ω (110 to 330) M Ω (330 to 1100) M Ω	34 $\mu\Omega/\Omega$ + 0.01 Ω 24 $\mu\Omega/\Omega$ + 0.015 Ω 23 $\mu\Omega/\Omega$ + 0.015 Ω 23 $\mu\Omega/\Omega$ + 0.02 Ω 21 $\mu\Omega/\Omega$ + 0.02 Ω 22 $\mu\Omega/\Omega$ + 0.2 Ω 23 $\mu\Omega/\Omega$ + 0.1 Ω 24 $\mu\Omega/\Omega$ + 1 Ω 24 $\mu\Omega/\Omega$ + 1 Ω 46 $\mu\Omega/\Omega$ + 10 Ω 24 $\mu\Omega/\Omega$ + 10 Ω 44 $\mu\Omega/\Omega$ + 150 Ω 0.011 % + 250 Ω 0.021 % + 2.5 k Ω 0.048 % + 3 k Ω 0.24 % + 100 k Ω 1.2 % + 500 k Ω	Fluke 5520A
Resistance – Measure	(0 to 2) Ω (2 to 20) Ω (20 to 200) Ω (0.2 to 2) k Ω (2 to 20) k Ω (20 to 200) k Ω (0.2 to 2) M Ω (2 to 20) M Ω (20 to 200) M Ω (0.2 to 2) G Ω	6.9 $\mu\Omega$ + 4 $\mu\Omega$ 11 $\mu\Omega$ + 14 $\mu\Omega$ 6.6 $\mu\Omega$ + 50 $\mu\Omega$ 6.5 $\mu\Omega$ + 500 $\mu\Omega$ 6.4 $\mu\Omega$ + 5 m Ω 6.8 $\mu\Omega$ + 50 m Ω 8.7 $\mu\Omega$ + 1 Ω 20 $\mu\Omega$ + 100 Ω 0.011 % + 10 k Ω 0.13 % + 1 M Ω	Fluke 8508A

Parameter/Equipment	Range	CMC ² (±)	Comments
Electrical Simulation of Thermocouple Indicators & Indicating Systems –			
Type E	(-250 to -100) °C (-100 to -25) °C (-25 to 350) °C (350 to 650) °C (650 to 1000) °C	0.40 °C 0.19 °C 0.17 °C 0.20 °C 0.54 °C	Fluke 5520A
Type J	(-210 to -100) °C (-100 to -30) °C (-30 to 150) °C (150 to 760) °C (760 to 1200) °C	0.24 °C 0.18 °C 0.17 °C 0.18 °C 0.58 °C	
Type K	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 1000) °C (1000 to 1372) °C	0.28 °C 0.21 °C 0.18 °C 0.23 °C 0.57 °C	
Type T	(-250 to -150) °C (-150 to 0) °C (0 to 120) °C (120 to 400) °C	0.51 °C 0.23 °C 0.19 °C 0.18 °C	

Parameter/Range	Frequency	CMC ^{2, 6} (±)	Comments
AC Voltage – Generate			
(1 to 33) mV	(10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz	0.063 % + 6 μV 0.016 % + 6 μV 0.019 % + 6 μV 0.08 % + 6 μV 0.28 % + 12 μV 0.63 % + 50 μV	Fluke 5520A
(33 to 330) mV	(10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz	0.037 % + 8 μV 0.012 % + 8 μV 0.013 % + 8 μV 0.028 % + 8 μV 0.063 % + 32 μV 0.16 % + 70 μV	

Parameter/Range	Frequency	CMC ^{2, 6} (±)	Comments
AC Voltage – Generate (cont)			
330 mV to 3.3 V	(10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz	0.024 % + 50 µV 0.012 % + 60 µV 0.015 % + 60 µV 0.024 % + 50 µV 0.055 % + 130 µV 0.19 % + 600 µV	Fluke 5520A
(3.3 to 33) V	(10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz	0.024 % + 650 µV 0.012 % + 600 µV 0.019 % + 600 µV 0.028 % + 600 µV 0.07 % + 1.6 mV	
(33 to 330) V	45 Hz to 1 kHz (1 to 10) kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz	0.016 % + 2 mV 0.016 % + 6 mV 0.02 % + 6 mV 0.025 % + 6 mV 0.16 % + 50 mV	
(330 to 1020) V	45 Hz to 1 kHz (1 to 5) kHz	0.024 % + 0.13 mV 0.02 % + 10 mV	
AC Voltage – Measure			
(0 to 200) mV	(10 to 40) Hz (40 to 100) Hz (0.1 to 2) kHz (2 to 10) kHz (10 to 30) kHz	0.014 % + 4 µV 93 µV/V + 4 µV 0.011 % + 2 µV 0.012 % + 4 µV 0.028 % + 8 µV	Fluke 8508A
(0.2 to 2) V	(10 to 40) Hz (40 to 100) Hz (0.1 to 2) kHz (2 to 10) kHz (10 to 30) kHz (30 to 100) kHz	0.01 % + 20 µV 83 µV/V + 20 µV 63 µV/V + 20 µV 90 µV/V + 20 µV 0.019 % + 40 µV 0.047 % + 200 µV	

Parameter/Range	Frequency	CMC ^{2, 6} (±)	Comments
AC Voltage – Measure (cont)			
(2 to 20) V	(10 to 40) Hz (40 to 100) Hz (0.1 to 2) kHz (2 to 10) kHz (10 to 30) kHz (30 to 100) kHz (100 to 300) kHz	95 µV/V + 200 µV 74 µV/V + 200 µV 64 µV/V + 200 µV 89 µV/V + 200 µV 0.018 % + 400 µV 0.045 % + 2 mV 0.24 % + 20 mV	Fluke 8508A
(20 to 200) V	(10 to 40) Hz (40 to 100) Hz (0.1 to 2) kHz (2 to 10) kHz (10 to 30) kHz (30 to 100) kHz	95 µV/V + 2 mV 73 µV/V + 2 mV 62 µV/V + 2 mV 88 µV/V + 2 mV 0.018 % + 4 mV 0.046 % + 20 mV	
(200 to 1000) V	(10 to 40) Hz 40 Hz to 10 kHz	0.01 % + 20 mV 93 µV/V + 20 mV	
AC High Voltage – Measure			
(0 to 20) kV	60 Hz	3.9 %	Fluke 80K-40 with Fluke 8508A
(35 to 40) kV	60 Hz	4.4 %	
AC Current – Generate			
(30 to 330) µA	(10 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz	0.12 % + 0.1 µA 0.10 % + 0.1 µA 0.23 % + 0.15 µA 0.62 % + 0.2 µA 1.3 % + 0.4 µA	Fluke 5520A
(0.33 to 3.3) mA	(10 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz	0.12 % + 0.4 µA 0.08 % + 0.15 µA 0.16 % + 0.2 µA 0.39 % + 0.3 µA 0.78 % + 0.6 µA	
(3.3 to 33) mA	(10 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz	0.07 % + 2 µA 0.03 % + 2 µA 0.06 % + 2 µA 0.16 % + 3 µA 0.32 % + 4 µA	

Parameter/Range	Frequency	CMC ^{2, 6} (±)	Comments
AC Current – Generate (cont)			
(33 to 330) mA	(10 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.07 % + 20 μA 0.03 % + 20 μA 0.08 % + 50 μA 0.2 % + 100 μA	Fluke 5520A
(0.33 to 1.1) A	(10 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.13 % + 100 μA 0.04 % + 100 μA 0.42 % + 1 mA 1.8 % + 5 mA	
(1.1 to 3) A	(10 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.14 % + 10 mA 0.05 % + 10 mA 0.47 % + 1 mA 2 % + 5 mA	
(3 to 11) A	(45 to 100) Hz 100 Hz to 1 kHz (1 to 5) kHz	0.05 % + 2 mA 0.08 % + 2 mA 2.4 % + 2 mA	
(11 to 20.5) A	(45 to 100) Hz (0.1 to 1) kHz (1 to 5) kHz	0.1 % + 5 mA 0.12 % + 5 mA 2.4 % + 5 mA	
Clamp-On Meters – Generate			
Toroidal			
(20 to 150) A	(45 to 65) Hz (65 to 440) Hz	0.48 % + 0.025 A 0.76 % + 0.027 A	Fluke 5520A and Fluke 50 turn coil
(150 to 1000) A	(45 to 65) Hz (65 to 440) Hz	0.24 % + 0.09 A 0.98 % + 0.1 A	
Non-Toroidal			
(20 to 150) A	(45 to 65) Hz (65 to 440) Hz	0.61 % + 0.25 A 0.89 % + 0.25 A	
(150 to 1000) A	(45 to 65) Hz (65 to 440) Hz	0.45 % + 0.9 A 1.1 % + 0.9 A	

Parameter/Equipment	Range	CMC ^{2, 6} (±)	Comments
AC Current – Measure			
(0 to 200) μ A	(1 to 10) Hz (0.010 to 10) kHz (10 to 30) kHz (30 to 100) kHz	0.02 % + 0.02 μ A 0.03 % + 0.02 μ A 0.06 % + 0.02 μ A 0.31 % + 0.02 μ A	Fluke 8508A
(0.2 to 2) mA	(1 to 10) Hz (0.010 to 10) kHz (10 to 30) kHz (30 to 100) kHz	0.02 % + 0.2 μ A 0.02 % + 0.2 μ A 0.06 % + 0.2 μ A 0.31 % + 0.2 μ A	
(2 to 20) mA	(1 to 10) Hz (0.010 to 10) kHz (10 to 30) kHz (30 to 100) kHz	0.03 % + 2 μ A 0.03 % + 2 μ A 0.06 % + 2 μ A 0.31 % + 2 μ A	
(20 to 200) mA	(1 to 10) Hz (0.010 to 10) kHz	0.02 % + 20 μ A 0.02 % + 20 μ A	
(0.2 to 2) A	(10 to 30) kHz	0.05 % + 20 μ A	
(2 to 20) A	10 Hz to 2 kHz (2 to 10) kHz (10 to 30) kHz 10 Hz to 2 kHz (2 to 10) kHz	0.05 % + 200 μ A 0.06 % + 200 μ A 0.23 % + 200 μ A 0.06 % + 2 mA 0.19 % + 2 mA	
Oscilloscope –			
Square wave – 50 Ω @ 1 kHz	(1 to 20) mV _(p-p) (20 to 100) mV _(p-p) (0.110 to 2) V _(p-p) (2 to 5) V _(p-p)	0.25 % + 0.04 mV _(p-p) 0.34 % + 0.04 mV _(p-p) 0.33 % + 0.04 mV _(p-p) 0.68 % + 0.04 mV _(p-p)	Fluke 5522A/ SC1100
1 M Ω @ 1 kHz	(1 to 25) mV _(p-p) (25 to 110) mV _(p-p) (0.110 to 2.2) V _(p-p) (2.2 to 11) V _(p-p) (11 to 130) V _(p-p)	0.09 % + 0.04 mV _(p-p) 0.16 % + 0.04 mV _(p-p) 2.2 % + 0.04 mV _(p-p) 0.16 % + 0.04 mV _(p-p) 0.12 % + 0.04 mV _(p-p)	

Parameter/Equipment	Range	CMC ^{2, 6} (±)	Comments
Oscilloscope – (cont)			
Level Sine Wave Generation Amplitude (5 mV to 5.5 V)	50 kHz ref (0.05 to 100) MHz (100 to 300) MHz (300 to 600) MHz	1.6 % + 300 μV 2.8 % + 300 μV 3.2 % + 300 μV 4.8 % + 300 μV	Fluke 5522A/ SC1100
Flatness	(0.05 to 100) MHz (100 to 300) MHz (300 to 600) MHz	1.2 % + 100 μV 1.6 % + 100 μV 3.2 % + 100 μV	
Time Marker (50 Ω Source & Period)	2 ns to 20 ms 50 ms to 5 s	0.003 % 0.1 % + 130 μs	

IV. Fluid Quantities

Parameter/Equipment	Range	CMC ^{2, 4, 5} (±)	Comments
Gas Flow – Measure	10 sccm to 200 SLPM (200 to 2000) SLPM	0.25 % 0.25 %	Molbox™1+/Molbloc™-L Molbox™1+/Molbloc™-S
Volume – Calibration of Pipettes, Fixed Points ³	0.1 μL 0.5 μL 1 μL 2 μL 5 μL 10 μL 20 μL 50 μL 100 μL 200 μL 500 μL 1000 μL 2000 μL 5000 μL 10 000 μL	0.03 μL 0.03 μL 0.03 μL 0.03 μL 0.04 μL 0.04 μL 0.05 μL 0.11 μL 0.2 μL 0.4 μL 1 μL 2 μL 4 μL 10 μL 20 μL	Gravimetric method

Parameter/Equipment	Range	CMC ^{2, 4, 5} (±)	Comments
Gas Concentration ³ –			
O ₂	15.00 % 20.90 %	0.91 % 1.1 %	Extech SDL 150
CO ₂	5.00 % 10.00 % 20.00 %	0.48 % 0.59 % 0.80 %	GMP70
Gas Detection Equipment –			
O ₂	(0 to 20.00) %	2.3 %	Standard gas
CO ₂	(0 to 20.00) %	2.1 %	

V. Mechanical

Parameter/Equipment	Range	CMC ² (±)	Comments
Calibration of Mass Standards, Fixed points	0.001 g 0.002 g 0.003 g 0.005 g 0.010 g 0.020 g 0.030 g 0.050 g 0.10 g 0.20 g 0.30 g 0.50 g 1.0 g 2.0 g 5.0 g 10 g 20 g 30 g	3.8 µg 3.8 µg 5.5 µg 3.8 µg 3.8 µg 3.8 µg 5.5 µg 3.8 µg 3.8 µg 5.5 µg 3.8 µg 1.2 µg 13 µg 14 µg 14 µg 23 µg 31 µg 34 µg	Mass measurement by appropriate mass comparator method (ABBA Sw, ABA, modified ABA, etc.)

Parameter/Equipment	Range	CMC ² (±)	Comments
Calibration of Mass Standards, Fixed points (cont)	50 g 100 g 200 g 300 g 500 g 1000 g 2000 g 3000 g 5000 g 10 kg 20 kg 25 kg 30 kg	46 µg 95 µg 0.19 mg 0.30 mg 0.45 mg 0.92 mg 1.9 mg 11 mg 11 mg 14 mg 27 mg 31 mg 35 mg	Mass measurement by appropriate mass comparator method (ABBA Sw, ABA, modified ABA, etc.)
Calibration of Weighing Standards ³ – Fixed Points	0.001 g 0.002 g 0.005 g 0.010 g 0.020 g 0.050 g 0.10 g 0.20 g 0.50 g 1.0 g 2.0 g 5.0 g 10 g 20 g 50 g 100 g 200 g 500 g 1000 g 2000 g 5000 g 10 000 g 20 000 g	6.4 µg 7.7 µg 8.8 µg 7.6 µg 6.7 µg 7.9 µg 8.8 µg 6.9 µg 5.8 µg 24 µg 23 µg 33 µg 31 µg 36 µg 63 µg 0.18 mg 0.26 mg 0.64 mg 1.6 mg 12 mg 14 mg 31 mg 39 mg	Balance and scale field calibration using Class 1 and Class 3 weights

Parameter/Equipment	Range	CMC ^{2, 4, 5} (±)	Comments
Pneumatic Pressure – Measuring Equipment	(0 to 1) inH ₂ O	0.0003 inH ₂ O	Fluke 7250LP
	(0 to 3) inH ₂ O	0.0004 inH ₂ O	
	(0 to 10) inH ₂ O	0.0005 inH ₂ O	Mensor CPC6000
	(0 to 30) inH ₂ O	0.0015 inH ₂ O	
	(-15 to 65) psig	0.004 psi	
	(65 to 145) psig	0.038 %	
(-15 to 242) psig	0.015 psi		
(242 to 500) psig	0.012 %		
(0 to 8.75) psia	0.0006 psia		
(8.75 to 17.5) psia	0.016 %		
(0 to 17.5) psia	0.0017 psia		
(17.5 to 35) psia	0.036 %		
(8.75 to 17.5) psia	0.013 %		
Hydraulic Pressure – Measuring Equipment	(50 to 10 000) psig	0.02 %	580DX dead weight tester
Pressure – Measure ³	(0 to 1) inH ₂ O	0.35 %	Fluke 700P00
	(0 to 10) inH ₂ O	0.35 %	Fluke 700P01
	(0 to 15) psi	0.08 %	Fluke 700P04
	(-15 to 200) psi	0.10 %	Fluke 700PD7
	(50 to 10 000) psi	0.09 %	Fluke 700P31
Vacuum – Measure	(0 to 1000) mTorr	9 %	MKS PVS6
	(1 to 1000) Torr	7 %	
Torque Wrenches	(0.026 to 600) ft·lbf	0.12 %	Digital torque calibrator
Torque Transducers	(0.026 to 600) ft·lbf	0.12 %	Torque arms, wheels, and standard weights

VI. Thermodynamics

Parameter/Equipment	Range	CMC ^{2,5} (±)	Comments
Relative Humidity – Measuring Equipment (0 to 70) °C	(10 to 90) % RH	1 % RH	Thunder Scientific 2500ST-LT
Relative Humidity – Measure ³	(0 to 90) % RH (90 to 100) % RH	1.7 % RH 2.0 % RH	Vaisala MI70 and HMP77
Temperature – Measure ³	(-196 to 0.01) °C (0.01 to 400) °C (400 to 660) °C (660 to 1200) °C	0.004 °C 0.006 °C 0.011 °C 0.62 °C	SPRT Type “S” thermocouple
Temperature – Measuring Equipment, Fixed Points Mercury Triple Point Water Indium Zinc	-38.8344 °C 0.010 °C 156.5985 °C 419.527 °C	2.0 °mC 1.6 °mC 2.4 °mC 3.8 °mC	Fluke miniature fixed reference point cells
Dew Point – Measuring Equipment	(10 to 60) °C (-70 to 10) °C (-80 to -70) °C (-90 to -80) °C (-95 to -90) °C	0.02 °C 0.02 °C 0.02 °C 0.03 °C 0.03 °C	Humidity generator

VII. Time & Frequency

Parameter/Equipment	Range	CMC ^{2,6} (±)	Comments
Frequency – Measure	0.1 Hz to 10 MHz	10 parts in 10 ⁹ Hz	Fluke 910 w/ frequency counter
Frequency – Measuring Equipment	(0.01 to 225) MHz	10 parts in 10 ⁹ Hz	Fluke 910 w/ function generator

Parameter/Equipment	Range	CMC ^{2,5} (±)	Comments
RPM – Measure ³	(2.5 to 60) RPM (61 to 600) RPM (601 to 6000) RPM (6001 to 100 000) RPM	0.02 % 0.01 % 0.02 % 0.01 %	Tachometer
Time ³	(0 to 86 400) s	0.001 %	Timer

¹ This laboratory offers commercial calibration service.

² Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

³ Field calibration service is available for this calibration and this laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these calibrations. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.

⁴ In the statement of CMC, L is the measured displacement in inches; a percent refers to percent of reading unless otherwise noted

⁵ The stated measured values are determined using the indicated instrument (see Comments). This capability is suitable for the calibration of the devices intended to measure or generate the measured value in the ranges indicated. CMCs are expressed as either a specific value that covers the full range or as a percent or fraction of the reading plus a fixed floor specification.

⁶ The type of instrument or material being calibrated is defined by the parameter. This indicates the laboratory is capable of calibrating instruments that measure or generate the values in the ranges indicated for the listed measurement parameter.

⁷ This scope meets A2LA's P112 Flexible Scope Policy.



Accredited Laboratory

A2LA has accredited

INTEGRATED SERVICE SOLUTIONS, INC.

Lansdale, PA

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets R205 – Specific Requirements: Calibration Laboratory Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 19th day of July 2019.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2551.01
Valid to April 30, 2021

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.